

### **Remarks**

Claims 1-20 are pending in the application. Claims 8 and 12 have been withdrawn from consideration, claims 6, 14, 18 and 19 were objected to, and claims 1-5, 7, 9-11, 13, 15-17 and 20 were rejected. By this paper, claims 1, 2 and 9 have been amended, and reconsideration of the claims is respectfully requested. Furthermore, new claims 21-23 have been added.

### **Rejection Under 35 U.S.C. § 102**

Claims 1-4, 9 and 10 were rejected under § 102(b) as being anticipated by Japanese reference JP 04-186731 A in the name of Inaba et al. Furthermore, claims 1, 2, 4, 5, 7 and 9-11 were rejected under § 102(b) as being anticipated by U.S. Patent No. 5,284,725 to Takatsu.

Claims 1 has been amended to recite:

- forming first and second conductive layers on first and second sides, respectively, of a substrate;
- etching the first conductive layer to form a plurality of conductive traces;
- etching the first conductive layer to form at least one mask feature;
- etching the second conductive layer to define a ground plane; and
- removing substrate material that is not covered by the at least one mask feature so as to form at least one mechanical alignment feature;
- wherein the conductive traces and the ground plane form part of the conductive device.

Thus, the first conductive layer formed on the first side of the substrate is etched to form the conductive traces and the at least one mask feature. By contrast, Inaba et al. '731 discloses forming circuit-wiring pattern 2 and metal mask 3 from different layers disposed on opposite sides of substrate 1. Moreover, Inaba et al. '731 teaches that metal mask 3 is completely removed after formation of hole 10. (See Figure 2 (4) and page 5 of the English

translation of Inaba et al. '731.) Therefore, Inaba et al. '731 teaches away from using the same conductive layer to form conductive traces and at least one mask feature as claimed.

As noted above, claim 1 also requires etching the second conductive layer, which is formed on the second side of the substrate, to define a ground plane. Thus, the ground plane is formed on a different side of the substrate as compared with the conductive traces and the at least one mask feature. With respect to Takatsu '725, this reference discloses forming lead 9 on a top surface of a substrate, forming a ground metal layer 19 on a back surface of the substrate, and dissolving parts of the substrate that are exposed at the back surface to form various holes. (See col. 6, ll. 7-10, and col. 10, ll. 22-48.) Takatsu '725 does not disclose using the same conductive layer to form conductive traces and at least one mask feature as claimed. For these reasons, applicants respectfully believe that claim 1 and the associated dependent claims are allowable.

With respect to claim 9, this claim has been amended to recite:

forming first and second conductive layers on first and second opposite sides, respectively, of a substrate;  
etching the first conductive layer to form multiple spaced apart conductive traces, each trace having a contact portion,  
etching the first conductive layer to form multiple mask features that cooperate to define a template;  
etching the second conductive layer to define a ground plane that includes multiple ground contact portions; and  
ablating with a laser substrate material that is not covered by the template so as to form a plurality of mechanical alignment features;  
wherein the conductive traces and the ground plane form part of the printed circuit board.

For at least the reasons discussed above with respect to claim 1, claim 9 is also believed to be allowable.

**Rejection Under 35 U.S.C. § 103**

Claims 1-5, 7, 9-11, 13, 15-17 and 20 were rejected under § 103(a) as being unpatentable over the Takatsu '725. As noted above, claims 1 and 9 are believed to be

allowable over Takatsu '725. Because claims 2-5, 7, 10, 11, 13, 15-17 and 20 depend from either claim 1 or claim 9, these claims are also believed to be allowable.

#### **New Claims**

New claims 21-23 have been added for the Examiner's consideration. With respect to claim 22, this claim recites features of claim 6 in independent form. Because claim 6 was indicated as being allowable if rewritten in independent form, claim 22 is also believed to be allowable.


#### **Conclusion**

Applicants have made a genuine effort to respond to each of the Examiner's objections and rejections in advancing the prosecution of this case. Applicants believe that all formal and substantive requirements for patentability have been met and that this case is in condition for allowance, which action is respectfully requested. If any additional issues need to be resolved, the Examiner is invited to contact the undersigned at his earliest convenience.

The Examiner is authorized to charge an additional claim fee of \$54, for the presentation of three additional claims in excess of twenty claims, to Storage Technology Corporation's Deposit Account No. 19-4545.

The Examiner is authorized to charge any additional fees or credit any overpayment as a result of the filing of this paper to Storage Technology Corporation's Deposit Account No. 19-4545.

Respectfully submitted,  
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